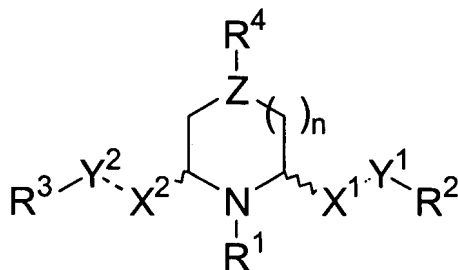


AMENDMENT TO THE CLAIMS

A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.

1. (Currently Amended) A 2,6-substituted piperidino compound ~~[[and]]~~ or pharmaceutically effective salts thereof, including resolved diastereomers~~[[,]]~~ or enantiomers thereof, comprising the following formula:



wherein

n is an integer from 0 to 3;

X¹ represents CH₂;

Y¹ represents CHOH or C=O;

X²---Y² represents a *cis*-carbon-carbon double bond or a *trans*-carbon-carbon double bond;

Z represents CH;

R¹ and R⁴ are the same or independently different from one another and represent hydrogen or a lower straight chain or branched alkyl;

R² and R³ are the same or are independently different from one another and represent a saturated or unsaturated hydrocarbon ring, or an ortho, meta or para-substituted benzene.

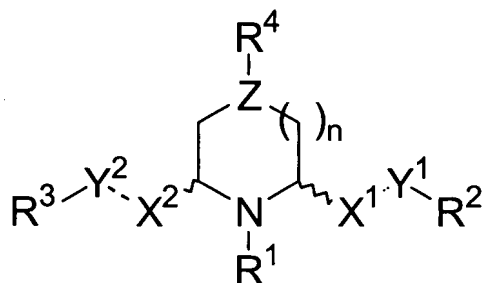
2. (Original) The compound of claim 1, wherein R² and R³ are benzene rings.

3. (Original) The compound of claim 2, wherein R¹ is hydrogen, methyl, ethyl or propyl.

4. (Original) The compound of claim 1, wherein R^2 and R^3 are substituted benzenes containing at least one substituent selected from the group consisting of methyl, ethyl, propyl, isopropyl, butyl, sec-butyl, isobutyl, carboxaldehyde, acetoxy, propionyloxy, isopropionyloxy, acetyl, propionyl, formyl, benzoyl, hydroxyl, methoxy, ethoxy, propoxy, isopropoxy, fluoro, chloro, bromo, iodo, and trifluoromethyl.

5. (Original) The compound of claim 1, wherein said compound is selected from the group consisting of N-methyl-2R-phenacyl-6S-*trans*-styrylpiperidine, *cis*-10R,2S,6R-N-methyl-6-[1-(2-hydroxy-2-phenyl)-ethyl]-2-*trans*-styrylpiperidine, *cis*-10S,2S,6R-N-methyl-6-[1-(2-hydroxy-2-phenyl)-ethyl]-2-*trans*-styrylpiperidine, N-methyl-2R-phenacyl-6S-*trans*-styrylpiperidine, N-Methyl-2R-(2R-hydroxy-2-phenethyl)-6S-*trans*-styrylpiperidine, N-methyl-2R-(2S-hydroxy-2-phenethyl)-6S-*trans*-styrylpiperidine, and N-methyl-2R-(2-phenethyl)-6S-*trans*-styrylpiperidine.

6. (Currently Amended) A 2,6-substituted piperidino compound [[and]] or pharmaceutically effective salts thereof, including resolved diastereomers[[,]] or enantiomers thereof, comprising the following formula:



wherein:

$n = 0, 1, 2, \text{ or } 3$;

$X^1\text{---}Y^1$ represents a *cis*-carbon-carbon double bond or a *trans*-carbon-carbon double bond;

X^2 represents CH_2 ;

Y^2 represents CHOH or C=O ;

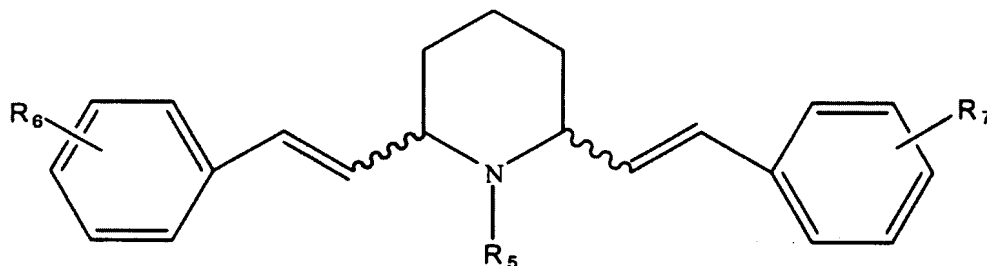
Application No.: 10/813,647

Z represents CH;

R^1 and R^4 are the same or independently different from one another and represent hydrogen or a lower straight chain or branched alkyl;

R^2 and R^3 are the same or are independently different from one another and represent a saturated or unsaturated hydrocarbon ring, or an ortho, meta or para-substituted benzene.

7. (Original) The compound of claim 6, wherein R^2 and R^3 are benzene rings.
8. (Original) The compound of claim 6, wherein R^1 is hydrogen, methyl, ethyl or propyl.
9. (Original) The compound of claim 6, wherein R^1 is hydrogen, methyl, ethyl or propyl.
10. (Original) The compound of claim 1, wherein R^2 and R^3 are substituted benzenes containing at least one substituent selected from the group consisting of methyl, ethyl, propyl, isopropyl, butyl, sec-butyl, isobutyl, carboxaldehyde, acetoxy, propionyloxy, isopropionyloxy, acetyl, propionyl, formyl, benzoyl, hydroxyl, methoxy, ethoxy, propoxy, isopropoxy, fluoro, chloro, bromo, iodo, and trifluoromethyl.
11. (Original) The compound of claim 6, wherein the compound is selected from the group consisting of N-methyl-2R-*trans*-styryl-6S-(2-phenethyl)piperidine and N-methyl-2S-*trans*-styryl-6S-(2-phenethyl)piperidine.
12. (Withdrawn) A 2,6-substituted piperidino compound and pharmaceutically effective salts thereof following formula:



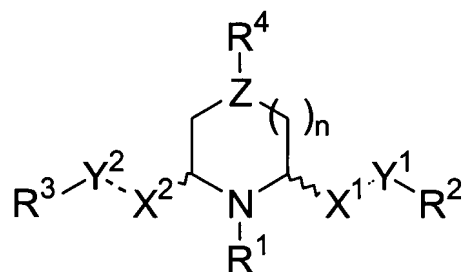
wherein

R₅ represents hydrogen, methyl, deuteromethyl (CD₃), tritiomethyl (CT₃), ethyl, or C₃-C₇ straight chain or branched alkyl, C₃-C₆ cycloalkyl, vinyl, allyl, C₄-C₇ alkenyl, benzyl, and phenylethyl; and

R₆ and R₇ represent hydrogen, methyl, ethyl, C₃-C₇ straight chain or branched alkyl, C₃-C₆ cycloalkyl, vinyl, allyl, C₄-C₇ alkenyl, benzyl, phenylethyl, N-methylamino, N,N-dimethylamino, carboxylate, methylcarboxylate, ethylcarboxylate, propylcarboxylate, isopropylcarboxylate, carboxaldehyde, acetoxy, propionyloxy, isopropionyloxy, cyano, aminomethyl, N-methylaminomethyl, N,N-dimethylaminomethyl, carboxamide, N-methylcarboxamide, N,N-dimethylcarboxamide, acetyl, propionyl, formyl, benzoyl, sulfate, methylsulfate, hydroxyl, methoxy, ethoxy, propoxy, isopropoxy, thiol, methylthio, ethylthio, propiothiol, fluoro, chloro, bromo, iodo, trifluoromethyl, propargyl, nitro, carbamoyl, ureido, azido, isocyanate, thioisocyanate, hydroxylamino, and nitroso.

13. (Withdrawn) The compound of claim 12, wherein R¹ is hydrogen, methyl, ethyl or propyl.

14. (Withdrawn) The compound of claim 12, wherein the compound is selected from the group consisting of N-methyl-2,6-*cis*-di-*trans*-styrylpiperidine, N-methyl-2*S*,6*S*-*trans*-di-*trans*-styrylpiperidine, and N-methyl-2*R*,6*R*-*trans*-di-*trans*-styryl piperidine.



R² and R³ are the same or are independently different from one another and represent a saturated or unsaturated hydrocarbon ring, or an ortho, meta or para-substituted benzene.

16. (Original) The compound of claim 15, wherein R¹ is hydrogen, methyl, ethyl or propyl.

17. (Original) The compound of claim 15, wherein R² and R³ are benzene rings.

18. (Original) The compound of claim 15, wherein R² and R³ are substituted benzenes containing at least one substituent selected from the group consisting of methyl, ethyl, propyl, isopropyl, butyl, sec-butyl, isobutyl, carboxaldehyde, acetoxy, propionyloxy,

isopropionyloxy, acetyl, propionyl, formyl, benzoyl, phenyl, hydroxyl, methoxy, ethoxy, propoxy, isopropoxy, fluoro, chloro, bromo, iodo, and trifluoromethyl.

19. (Original) The compound of claim 15, wherein R^2 and R^3 are naphthyl or diphenyl groups.

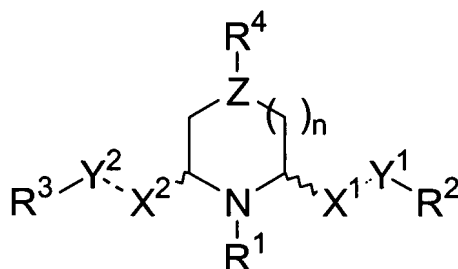
20. (Original) The compound of claim 15, wherein Z is $N-R^4$.

21. (Original) The compound of claim 15, wherein Z is $CH-R^4$.

22. (Original) The compound of claim 14, wherein the compound is selected from the group consisting of *cis*-10R,2S,6R- and *cis*-10S,2S,6R-N-methyl-6-[1-(2-hydroxy-2-phenyl)ethyl]-2-*trans*-styrylpiperidine, *cis*-2S,6R-N-methyl-6-[1-(2-hydroxy-2-phenyl)ethyl]-2-phenylethylpiperidine, 2S,6R, 8S-2-[6-(β -*para*-toluenesulfonyloxyphenethyl)-1-methyl-2-piperidyl]-acetophenone, N-Methyl-2R-(2R-hydroxy-2-phenethyl)-6S-(2-phenethyl) piperidine, N-Methyl-2R-(2S-hydroxy-2-phenethyl)-6S-(2-phenethyl) piperidine, N-methyl-2,6- *cis*-di-(2-phenethyl)piperidine, 2,6-*cis*-diphenethylpiperidine, N-ethyl-2,6-*cis*-diphenethylpiperidine, N-(n-propyl)-2,6-*cis*-diphenethylpiperidine, 2,6-*cis*-di-(3,4-methylenedioxyphenethyl)piperidine, N-methyl-2,6-*cis*-di-(3,4-methylenedioxyphenethyl)-piperidine, N-methyl-2S,6S-*trans*-di-(2-phenethyl)piperidine, N-methyl-2R,6R-*trans*-di-(2-phenethyl)piperidine, 2,6-*cis*-di-(*o*-fluorophen-ethyl)piperidine, N-methyl-2,6-*cis*-di-(*o*-fluorophenethyl)-piperidine, 2,6-*cis*-di-(*m*-fluorophenethyl)piperidine, N-methyl-2,6-*cis*-di-(*m*-fluorophenethyl)-piperidine, 2,6-*cis*-di-(*p*-fluorophenethyl)piperidine, N-methyl-2,6-*cis*-di-(*p*-fluorophenethyl)-piperidine, 2,6-*cis*-di-(*o*-methoxyphenethyl)piperidine, N-methyl-2,6-*cis*-di-(*o*-methoxyphen-ethyl)piperidine, 2,6-*cis*-di-(*m*-methoxyphenethyl)piperidine, N-methyl-2,6-*cis*-di-(*m*-methoxyphenethyl)piperidine, 2,6-*cis*-di-(*p*-methoxyphenethyl)piperidine, N-methyl-2,6-*cis*-di-(*p*-methoxyphenethyl)piperidine, 2,6-*cis*-di-(*p*-methylphenethyl)piperidine, N-methyl-2,6-*cis*-di-(*p*-methylphenethyl)piperidine, 2,6-*cis*-di-(*m*-trifluoromethylphenethyl)piperidine, N-methyl-2,6-*cis*-di-(*m*-trifluoromethylphenethyl)piperidine, 2,6-*cis*-di-(*p*-phenylphenethyl)piperidine, N-methyl-2,6-*cis*-

di-(*p*-phenylphenethyl)piperidine, 2,6-*cis*-di-(*p*-hydroxymethylphenethyl)-piperidine, 2,6-*cis*-di-(*p*-acetoxymethylphenethyl)piperidine, 2,6-*cis*-di-(2, 4-dichlorophenethyl)-piperidine, N-methyl-2,6-*cis*-di-(2,4-dichlorophenethyl)piperidine, 2,6-*cis*-di-(1-naphthalen-ethyl)piperidine, N-methyl-2,6-*cis*-di-(1-naphthalenethyl)piperidine, 2,6-*cis*-di-(2-naphthalen-ethyl)piperidine, N-methyl-2,6-*cis*-di-(2-naphthalenethyl)piperidine, 2,6-*cis*-diphenethyl-piperazine, and 1,4-dimethyl-2,6-*cis*-diphenethylpiperazine.

23. (Withdrawn) A 2,6-substituted piperidino or a 2,6-substituted piperazino compound and pharmaceutically effective salts thereof, including resolved diastereomers, enantiomers thereof, comprising the following formula:



wherein

n is an integer from 0 to 3;

X¹---Y¹ represents a carbon-carbon triple bond;

X²---Y² represents a CH₂-CH₂;

Z-R⁴ represents C=O; and

R² and R³ are the same or are independently different from one another and represent a saturated or unsaturated hydrocarbon ring, or an ortho, meta or para-substituted benzene.

24. (Withdrawn) The compound of claim 23, wherein R² and R³ are benzene rings.

25. (Withdrawn) The compound of claim 23, wherein R² and R³ are substituted benzenes containing at least one substituent selected from the group consisting of methyl, ethyl, propyl, isopropyl, butyl, sec-butyl, isobutyl, carboxaldehyde, acetoxy, propionyloxy,

Application No.: 10/813,647

isopropionyloxy, acetyl, propionyl, formyl, benzoyl, hydroxyl, methoxy, ethoxy, propoxy, isopropoxy, fluoro, chloro, bromo, iodo, and trifluoromethyl.

26. (Withdrawn) The compound of claim 23, wherein the compound is 2,6- *cis*-2-phenethynyl-6-phenethylperidin-4-one or 2,6-*trans*-2-phenethynyl-6-phenethylperidin-4-one

27. (Withdrawn) A method of treating an individual for dependence on a drug of abuse, withdrawal from a drug of abuse, an eating disorder, or a CNS disease or pathology comprising administering to the individual a therapeutically effect amount of a compound of claim 1.

28. (Withdrawn) A method of treating an individual for dependence on a drug of abuse, withdrawal from a drug of abuse, an eating disorder, or a CNS disease or pathology comprising administering to the individual a therapeutically effect amount of a compound of claim 5.

29. (Withdrawn) A method of treating an individual for dependence on a drug of abuse, withdrawal from a drug of abuse, an eating disorder, or a CNS disease or pathology comprising administering to the individual a therapeutically effect amount of a compound of claim 6.

30. (Withdrawn) A method of treating an individual for dependence on a drug of abuse, withdrawal from a drug of abuse, an eating disorder, or a CNS disease or pathology comprising administering to the individual a therapeutically effect amount of a compound of claim 11.

31. (Withdrawn) A method of treating an individual for dependence on a drug of abuse, withdrawal from a drug of abuse, an eating disorder, or a CNS disease or pathology

comprising administering to the individual a therapeutically effect amount of a compound of claim 15.

32. (Withdrawn) A method of treating an individual for dependence on a drug of abuse, withdrawal from a drug of abuse, an eating disorder, or a CNS disease or pathology comprising administering to the individual a therapeutically effect amount of a compound of claim 22.

33. (Withdrawn) A method of treating an individual for dependence on a drug of abuse, withdrawal from a drug of abuse, an eating disorder, or a CNS disease or pathology comprising administering to the individual a therapeutically effect amount of a compound of claim 23.

34. (Withdrawn) A method of treating an individual for dependence on a drug of abuse, withdrawal from a drug of abuse, an eating disorder, or a CNS disease or pathology comprising administering to the individual a therapeutically effect amount of a compound of claim 26.